FORM PTO-1449
U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT
LIST OF DOCUMENTS CITED BY APPLICANT
(Use several sheets if necessary)

ATTY DOCKET NO: Pedersen=9	SERIAL NO: 10/507,121
APPLICANT: PEDERSEN, et al.	
FILING DATE: March 17, 2005	GROUP:

U.S. PATENT DOCUMENTS (include at least patentee, patent number and issue date)

EXAMINER INITIAL		DOCUMENT NUMBER							DATE	PATENTEE			FILING DATE IF APPROP.
EW	KU	6	2	9	7	0	5	3	02OCT2001	Stemmer			
	KV	20	05	00	25	7	6	6	02FEB2005	Liu et al.			
	KW	20	05	00	42	6	6	9	24FEB2005	Liu et al.			

FOREIGN PATENT DOCUMENTS (include at least document number, publication date and country)

		DOCUMENT NUMBER							DATE	COUNTRY			TRANSLATION YES/NO
	KX	9	6	0	9	3	1	6	28MAR1996	PCT			
	KY	0	0	2	1	9	0	9	20APR2000	PCT			
	KZ	02	1	0	2	8	2	0	27Dec2002	PCT			
	LA	03	0	7	8	6	2	5	25Sept2003	PCT			
	LB	20	04	01	3	0	7	0	12Feb2004	PCT			
	LC	20	04	11	0	9	6	4	23DEC2004	PCT			
	LD	20	04	02	4	9	2	9	25Mar2004	PCT			
	LE	20	04	05	6	9	9	4	08July2004	PCT			
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	LG	03	0	7	8	6	2	6	25Sept2003	PCT			
	LH	03	0	7	8	0	5	0	25Sept2003	PCT			
	LI	03	0	7	8	6	2	6	25Sept2003	PCT			
	LJ	20	04	07	4	5	0	1	2Sept2004	PCT			
	LK	20	04	07	4	4	2	9	2Sept2004	PCT			
	LL	20	04	08	3	4	2	7	30Sept2004	PCT			
	LM	20	04	03	9	8	2	5	13May2004	PCT			
	LN	20	04	00	1	0	4	2	31Dec2003	PCT			
	LO	20	04	0	0	9	8	14	29JAN2004	PCT			
	LP	1	5	3	3	3	8	5	25May2005	EP			
	LQ	0	3	0	7	8	4	46	25Sept2003	PCT			

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OTHER DOCUMENTS (include author, title, name of publication, volume, pages and date of publication)

EW	LR	Doyon, J.B et al. "Highly sensitive in vitro selections for DNA-linked synthetic small molecules with protein binding affinity and specificity" J. AM. CHEM. SOC, September 16, 2003, pp. 1-2 and S1-S8.
	LS	Kanan, M.W et al. "Reaction discovery enabled by DNA-templated synthesis and in vitro selection" Nature, Vol. 431, 30 September 2004, pp. 545-549.
	LT	"Finding reactions in a haystack: Try'em all, see what works" Meeting American Chemical Society, 10 September 2004, Vol. 305, Science.

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INFORMATION DISCLOSURE STATEMENT LIST DOCUMENTS CITED BY APPLICANT (Use several sheets if necessary)	APPLICANT: Henrik PEDERSEN et al	
	FILING DATE: March 17, 2005	CONFIRMATION NO: 8893

U.S. PATENT DOCUMENTS (include at least patentee, patent number and issue date)

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	PATENTEE	CLASS	SUB-CLASS	FILING DATE IF APPROP.
EW	FN	6 4 2 9 3 0 0	Aug 6, 2002	Kurz, M et al.			
	FO	6 2 0 7 4 4 6	Mar 27, 2001	Szostak, J et al.			
	FP	6 1 4 3 5 0 3	Nov 7, 2000	Baskerville, DS et al.			
	FQ	6 6 2 0 5 8 7	Sept 16, 2002	Taussig, MJ et al.			May 28, 1998
	FR	20 03 00 04 1 2 2	Jan 2, 2003	Beigelman et al.			April 4, 2001
	FS	6 5 9 3 0 8 8	Jul 15, 2003	Saito, I et al.			Aug 24, 2000
	FT	5 5 7 1 9 0 3	Nov 5, 1991	Gryaznov,SM et al.			
	FU	5 4 7 6 9 3 0	Dec 19, 1995	Letsinger, RL et al.			
	FV	5 6 8 1 9 4 3	Oct 28, 1997	Letsinger, RL et al.			
	FW	5 7 8 0 6 1 3	Jul 14, 1998	Letsinger, RL et al.			
	FX	5 7 4 1 6 4 3	Apr 21, 1998	Gryaznov, SM et al.			
	FY	5 8 3 0 6 5 8	Nov 3, 1998	Gryaznov, SM et al.			
	FZ	5 8 4 3 6 5 0	Dec 1, 1998	Segev, D			
	GA	5 5 0 3 8 0 5	Apr 2, 1993	Sugarman et al.			
	GB	5 6 3 9 6 0 3	Jun 17, 1997	Dower et al.			
	GC	5 6 6 5 9 7 5	Sep 9, 1997	Kedar et al.			
	GD	5 7 0 8 1 5 3	Jan 13, 1998	Dower et al.			
	GE	5 7 7 0 3 5 8	Jun 23, 1998	Dower et al.			
	GF	5 7 8 9 1 6 2	Aug 4, 1998	Dower et al.			
	GG	6 0 5 6 9 2 6	May 2, 2000	Sugarman et al.			July 23, 1996
	GH	6 1 4 0 4 9 3	Oct 31, 2000	Dower et al.			Sept 11, 1998
	GI	6 1 4 3 4 9 7	Nov 2, 2000	Dower et al.			Mar 6, 1998
	GJ	6 1 6 5 7 1 7	Dec 26, 2000	Dower et al.			May 13, 1998
	GK	6 1 6 5 7 7 8	Dec 26, 2000	Kedar et al.			Jul 2, 1998
	GL	6 4 1 6 9 4 9	July 9, 2002	Dower et al.			Feb 24, 1999
	GM	5 5 7 3 9 0 5	Nov. 12,1996	Lerner, RL et al.			
	GN	5 7 2 3 5 9 8	Mar 3, 1998	Lerner, RL et al.			
	GO	6 0 6 0 5 9 6	May 9, 2000	Lerner, R et al.			Mar 3, 1998
	GP	4 8 2 2 7 3 1	April 18, 1989	Watson et al.			
	GQ	5 7 6 3 2 6 3	9 Jun 1998	Dehlinger, PJ			

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EW	GR	9	3	0	3	1	7	2	18 Feb 1991	PCT			
	GS	9	8	3	1	7	0	0	23 July 1998	PCT			
	GT	0	0	3	2	8	2	3	8 June 2000	PCT			
	GU	0	0	4	7	7	7	5	17 Aug 2000	PCT			
	GV	9	0	0	5	7	8	5	31 May 1990	PCT			
	GW	0	3	2	4	6	1	6	19 July 1989	EP			
	GX	9	6	3	5	6	9	9	14 Nov 1996	PCT			
	GY	0	6	9	5	3	0	5	27 October 1994	EP			
	GZ	0	6	0	4	5	5	2	1 April 1993	EP			
	HA	9	5	1	2	6	0	8	11 May 1995	PCT			
	HB	0	7	7	3	2	2	7	14 May 1997	EP			
	HC	0	7	7	6	3	3	0	4 Oct 1996	EP			
	HD	0	6	4	3	7	7	8	14 Oct. 1993	EP			
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	HI	9	6	1	2	0	1	4	25 April 1996	PCT			
	HJ	19	6	4	2	7	5	1	23 April 1998	DE			Eng. Abstract
	HK	9	7	3	5	1	9	8	25 Sept. 1997	PCT			
	HL	02	1	0	3	0	0	8	27 Dec 2002	PCT			
	HM	02	1	0	2	8	2	0	27 Dec 2002	PCT			
	HN	20	04	01	3	0	7	0	12 Feb 2004	PCT			
	HO	20	04	11	0	9	6	4	23 12 2004	PCT			
	HP	20	04	02	4	9	2	9	25 March 2004	PCT			
	HQ	20	04	05	6	9	9	4	8 July 2004	PCT			
	HR	03	0	7	8	4	4	5	25 Sept. 2003	PCT			
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	HT	03	0	7	8	0	5	0	25 Sept 2003	PCT			
	HU	03	0	7	8	4	4	6	25 Sept 2003	PCT			
	HV	03	0	7	8	6	2	7	25 Sept 2003	PCT			
	HW	20	04	07	4	5	0	1	2 Sept 2004	PCT			
	HX	20	04	07	4	4	2	9	2 Sept 2004	PCT			
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	HZ	20	04	03	9	8	2	5	13 May 2004	PCT			
	IA	20	04	00	1	0	4	2	31.12.2003	PCT			
	IB	20	05	0	3	7	7	8	13 Jan 2004	PCT			

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EW	IC	Nemoto, N et al. "In vitro virus: bonding of mRNA bearing puromycin at the 3'-terminal end to the C-terminal end of its encoded protein on the ribosome in vitro". FEBS Lett. 1997 Sep 8;414(2):405-8.
	ID	Roberts, RW et al. "RNA-peptide fusions for the in vitro selection of peptides and proteins". Proc Natl Acad Sci U S A. 1997 Nov 11;94(23):12297-302.
	IE	Kurz, M et al. **"An efficient synthetic strategy for the preparation of nucleic acid-encoded peptide and protein libraries for in vitro evolution protocols"** Fourth International Electronic Conference on Synthetic Organic Chemistry (ECSOC-4), www.mdpi.org/ecsoc-4.htm, September 1-30, 2000
	IF	Kurz, M et al. "Psoralen photo-crosslinked mRNA-puromycin conjugates: a novel template for the rapid and facile preparation of mRNA-protein fusions. Nucleic Acids Res. 2000 Sep 15;28(18):E83.
	IG	Keiler et al. "Role of a peptide tagging system in degradation of proteins synthesized from damaged messenger RNA". Science. 1996 Feb 16;271(5251):990-3.
	IH	Benner, SA. "Expanding the genetic lexicon: incorporating non-standard amino acids into proteins by ribosome-based synthesis". Trends Biotechnol. 1994 May;12(5):158-63
	II	Mendel, D." Site-directed mutagenesis with an expanded genetic code". Annu. Rev. Biophys. Biomol. Struc. 1995. 24:463-93
	IJ	Liu DR et al. "Engineering a tRNA and aminoacyl-tRNA synthetase for the site-specific incorporation of unnatural amino acids into proteins in vivo". Proc Natl Acad Sci U S A. 1997 Sep 16;94(19):10092-7.
	IK	Liu DR et al. "Progress toward the evolution of an organism with an expanded genetic code". Proc Natl Acad Sci USA. 1999 Apr 27;96(9):4780-5
	IL	Liu, R et al. "Optimized synthesis of RNA-protein fusions for in vitro protein selection". Methods Enzymol. 2000;318:268-93.
	IM	Wang, L et al. "A new functional suppressor tRNA/aminoacyl-tRNA synthetase pair for the in vivo incorporation of unnatural amino acids into proteins" J. Am. Chem. Soc 2000, 122, 5010-5011 Pub 5 April 2000
	IN	Ellman J.A., et al. " Biosynthetic method for introducing Unnatural Amino acids site specifically into proteins". Methods Enzymol. 202, 301-336 (1992)
	IO	José Salas et al. "Biosynthetic Polydeoxynucleotides as Direct Templates for Polypeptide Synthesis". J. of Biological Chemistry, vol.243, No. 6, 1968, p. 1012-1015
	IP	Walder JA, Walder RY, Heller MJ, Freier SM, Letsinger RL, Klotz IM. "Complementary carrier peptide synthesis: general strategy and implications for prebiotic origin of peptide synthesis". Proc Natl Acad Sci U S A. 1979 Jan;76(1):51-5.
	IQ	Bruick et al. "Template-directed ligation of peptides to oligonucleotides" Chemistry and Biology, vol. 3, No. 1, January 1996, p.49-56;
	IR	Tamura K, Schimmel P. "Oligonucleotide-directed peptide synthesis in a ribosome- and ribozyme-free system". Proc Natl Acad Sci U S A. 2001 Feb 13;98(4):1393-7.
	IS	Lewis RJ, Hanawalt PC. "Ligation of oligonucleotides by pyrimidine dimers--a missing 'link' in the origin of life?"22;298(5872):393-6.
	IT	Liu J, Taylor JS. "Template-directed photoligation of oligodeoxyribonucleotides via 4-thiothymidine". Nucleic Acids Res. 1998 Jul 1;26(13):3300-4
	IU	Fujimoto et al. "Template-directed photoreversible ligation of deoxyoligonucleotides via 5-Vinyldeoxyuridine" J. Am. Soc. 2000, 122, 5646-5647
	IV	Kenzo Fujimoto, Shigeo Matsuda, Naoki Ogawa, Masayuki Hayashi & Isao Saito "Template-directed reversible photocircularization of DNA via 5-vinyldeoxycytidine". TETRAHEDRON LETTERS 2000 , 41:33:6451-6454

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EW	IW	Kenzo Fujimoto, Naoki Ogawa, Masayuki Hayashi, Shigeo Matsuda & Isao Saito "Template directed photochemical synthesis of branched oligodeoxynucleotides via 5-carboxyvinyldeoxyuridine". Tetrahedron letters 2000, 41:49:9437-40
	IX	Letsinger et al. "Chemical Ligation of oligonucleotides in the presence and absence of a template". J. Amer. Chem. Soc. 1993, 115, 3808-9
	IY	Gryaznov SM, Letsinger RL. "Template controlled coupling and recombination of oligonucleotide blocks containing thiophosphoryl groups". Nucleic Acids Res. 1993 Mar 25;21(6):1403-8
	IZ	Gryaznov SM, Schultz R, Chaturvedi SK, Letsinger RL. "Enhancement of selectivity in recognition of nucleic acids via chemical autoligation". Nucleic Acids Res. 1994 Jun 25;22(12):2366-9.
	JA	Herrlein MK, Letsinger RL. "Selective chemical autoligation on a double-stranded DNA template". Nucleic Acids Res. 1994 Nov 25;22(23):5076-8
	JB	Letsinger, RL; Wu, T; Elghanian, R "Chemical and photochemical ligation of oligonucleotide blocks". Nucleosides and nucleotides, 16(5&6), 643-652 (1997)
	JC	Visscher J, Bakker CG, van der Woerd R, Schwartz AW "Template-directed oligomerization catalyzed by a polynucleotide analog". Science. 1989 Apr 21;244(4902):329-31.
	JD	Visscher J, van der Woerd R, Bakker CG, Schwartz AW. "Oligomerization of deoxynucleoside-bisphosphate dimers: template and linkage specificity". Orig Life Evol Biosph. 1989;19(1):3-6.
	JE	Zhan, ZJ and Lynn, DG "Chemical Amplification through template-directed synthesis". J. Am. Chem. Soc. 1997, 119, 12420-1
	JF	Bruick RK, Koppitz M, Joyce GF, Orgel LE. "A simple procedure for constructing 5'-amino-terminated oligodeoxynucleotides in aqueous solution Nucleic Acids Res". 1997 Mar 15;25(6):1309-10
	JG	Albagli, D; Atta, RVA; Cheng, P; Huan, B and Wood, ML. "Chemical amplification (CHAMP) by a continuous, self-replicating oligonucleotide-based system" J. Am. Chem. Soc. 1999, 121, 6954-6955. Pub. on the web 14 July 1999.
	JH	Xu, Y and Kool, E "Rapid and Selective selenium-mediated autoligation of DNA strands" J. Am. Chem. Soc. 2000, 122, 9040-1 Pub. on web 08/31/2000.
	JI	Xu Y, Karalkar NB, Kool ET. "Nonenzymatic autoligation in direct three-color detection of RNA and DNA point mutations". Nat Biotechnol. 2001 Feb;19(2):148-52.
	JJ	Li X, Zhan ZY, Knipe R, Lynn DG. "DNA-catalyzed polymerization". J Am Chem Soc. 2002 Feb 6;124(5):746-7.
	JK	Czlapinski, JL and Sheppard, TL. "Nucleic acid template-directed assembly of metallosalen-DNA conjugates". J Am Chem Soc. 2001 Sep 5;123(35):8618-9 published on the web 08/10/2001
	JL	Leitzel JC, Lynn DG "Template-directed ligation: from DNA towards different versatile templates". Chem Rec. 2001;1(1):53-62. Published online 30 Jan 2001.
	JM	Schmidt JG, Nielsen PE, Orgel LE. "Information transfer from peptide nucleic acids to RNA by template-directed syntheses". Nucleic Acids Res. 1997 Dec 1;25(23):4792-4796.
	JN	**DOWER, WJ et al. "In vitro selection as a powerful tool for the applied evolution of proteins and peptides".Current Opinion in Chemical Biology, 2002, 6:390-398.**
	JO	David Liu. "Expanding the reaction scope of DNA-templated synthesis Angew". Chem. Int. Ed. 2002, 41, No. 10 pp. 1796-1800. Published May 15, 2002.
	JP	Gartner, ZJ et al. "Multistep small-molecule synthesis programmed by DNA templates". J. AM. CHEM. SOC. Vol. 124, No. 35, 2002, 10304-10306.
	JQ	Calderone, CT et al. "Directing otherwise incompatible reactions in a single solution by using DNA-templated organic synthesis". Angew Chem Int Ed, 2002, 41, No. 21. 4104-4108.

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EW	JR	Bittker, JA; Phillips, KJ and Liu, DR "Recent advances in the in vitro evolution of nucleic acids". Curr Opin Chem Biol. 2002 Jun;6(3):367-74. Review. Pub. on the web 20th March 2002.
	JS	Gartner, ZJ et al. "Two enabling architectures for DNA-templated organic synthesis ". Angew. Chem Int. Ed. 2003, 42, No. 12, 1370-1375.
	JT	Rosenbaum, DM et al. "Efficient and sequence-specific DNA-templated polymerization of peptide nucleic acid aldehydes". J. AM. CHEM. SOC. Vol. 125, No. 46, 2003, 13924-13925.
	JU	Li, X et al. "Stereoselectivity in DNA-templated organic synthesis and its origins". J. AM. CHEM. SOC. Vol. 125, No. 34, 2003, 10188-10189.
	JV	Gordon, EM et al. "Applications of combinatorial technologies to drug discovery. 2. Combinatorial organic synthesis, library screening strategies, and future directions". Journal of Medicinal Chemistry, Vol. 37, No. 10, May 13, 1994.
	JW	Otto, S et al. S"Recent developments in dynamic combinatorial chemistry". Current opinion in Chemical Biology 2002, 6: 321-327.
	JX	Pavia, MR. "The Chemical generation of molecular diversity". http://www.netsci.org/Science/Combichem/feature01.html
	JY	Braun, E, et al. "DNA-templated assembly and electrode attachment of a conducting silver wire". Nature, Vol. 391, 19 February 1998, 775-778.
	JZ	**Tanaka, K et al. "Synthesis of a novel nucleoside for alternative DNA base pairing through metal complexation" J. Org. Chem. 1999, 64, 5002-5003.**
	KA	Berger, M et al. "Universal bases for hybridization, replication and chain termination", Nucleic acids research, Oxford University Press, vol. 28, no. 15, pub. 1 Aug. 2000, p2911-2914.
	KB	Weizman, H et al. **"2,2'-Bipyridine ligandoside: a novel building block for modifying DNA with intra-duplex metal complexes". J. Am. Chem. Soc. 2001, 123, 3375-3376.**
	KC	Frutos, AG et al. **"Demonstration of a word design strategy for DNA computing on surfaces". Nucleic Acids Research, 1997, Vol. 25, No. 23, 4748-4757.**
	KD	Loweth, CJ et al. "DNA-based assembly of gold nanocrystals". Angew. Chem. Int. Ed. 1999, 38, No. 12. 1808-1812.
	KE	**Elghanian, R et al. "Selective colorimetric detection of polynucleotides based on the distance-dependent optical properties of gold nanoparticles". Science, Vol. 277, 22 August 1997,.**
	KF	Storhoff, JJ and Mirkin, CA. "Programmed Materials Synthesis with DNA". Chem Rev. 1999 Jul 14;99(7):1849-1862.
	KG	Mirkin CA. "Programming the assembly of two- and three-dimensional architectures with DNA and nanoscale inorganic building blocks". Inorg Chem. 2000 May 29;39(11):2258-72.
	KH	Waybright SM, Singleton CP, Wachter K, Murphy CJ, Bunz UH. "Oligonucleotide-directed assembly of materials: defined oligomers". J Am Chem Soc. 2001 Mar 7;123(9):1828-33. Pub. on web 02/07/2001.
	KI	Bruce Smith and Markus Krummenacker "DNA-guided assembly of proteins as a pathway to an assembler" (http://www.wadsworth.org/albcon97/abstract/krummena.htm) The 1997 Albany Conference: Biomolecular Motors and Nanomachines
	KJ	DeWitt, SH et al. "Diversomers": an approach to nonpeptide, nonoligomeric chemical diversity". Proc. Natl. Acad. Sci, USA, Vol. 90, pp. 6909-6913, August 1993.
	KK	Nielsen, J et al. "Synthetic methods for the implementation of encoded combinatorial chemistry". J. Am. Chem. Soc. 1993, 115, 9812-9813.
	KL	Ohlmeyer, MHJ et al. "Complex synthetic chemical libraries indexed with molecular tags". Proc. Natl. Acad, Sci, USA, Vol. 90, pp. 10922-10926, Dec. 1993, Chemistry.
	KM	Zuckermann, RN et al. "Discovery of nanomolar ligands for 7-transmembrane G-protein-coupled receptors from a diverse N-(substituted) glycine peptoid library". J. Med. Chem. 1994, 37, 2678-2685.

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EW	KN	Luo, P et al. "Analysis of the structure and stability of a backbone-modified oligonucleotide: implications for avoiding product inhibition in catalytic template-directed synthesis". J. Am. Chem. Soc. 1998, 120, 3019-3031
	KO	Luther, A et al. "Surface-promoted replication and exponential amplification of DNA analogues". Nature, Vol. 396, 19 November 1998, 245-248.
	KP	Klekota, B et al. "Selection of DNA-Binding Compounds via Multistage Molecular Evolution". Tetrahedron 55 (1999) 11687-11697.
	KQ	Furlan, RLE et al. "Molecular amplification in a dynamic combinatorial library using non-covalent interactions". Chem. Commun., 2000, 1761-1762.
	KR	Ramström, O et al. "In situ generation and screening of a dynamic combinatorial carbohydrate library against concanavalin A". ChemBioChem, 2000, 1, 41-48.
	KS	Cousins, GRL et al. "Identification and Isolation of a Receptor for N-Methyl Alkylammonium Salts: Molecular Amplification in a Pseudo-peptide Dynamic Combinatorial Library". Angew. Chem. Int. Ed., 2001, 40, No. 2, 423-427.
	KT	Roberts, SI et al. "Simultaneous selection, amplification and isolation of a pseudo-peptide receptor by an immobilised N-methyl ammonium ion template". Chem. Commun., 2002, 938-939.

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EXAMINER INITIAL		DOCUMENT NUMBER							DATE	PATENTEE	CLASS	SUB-CLASS	FILING DATE IF APPROP.
EW	EA	20	05	00	42	6	6	9	Published 24 February 2005	Liu, David R			
	EB	20	05	00	25	7	6	6	Published 3 February 2005	Liu, David R			

FOREIGN PATENT DOCUMENTS (Include at least document number, publication date and country)

		DOCUMENT NUMBER							DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION YES/NO
	EC	20	04	09	9	4	4	1	18 Nov 2004	PCT			
	ED	03	0	8	2	9	0	1	9 Oct 2003	PCT			
	EE	9	1	0	5	0	5	8	18 April 1991	PCT			
	EF	20	05	02	6	3	8	7	24 March 2005	PCT			

OTHER DOCUMENTS (Include author, title, name of publication, volume, pages & date of publication)

	EG	"The Nucleus", January 2004, Vol. LXXXII, No. 5, R. Grubina; "Summer Research Report: R. Grubina on DNA Templated Synthesis for Small Molecule Library", p10-14
	EH	Nazarenko et al., "A closed tube format for amplification and detection of DNA based on energy transfer", Nucleic Acids Research, 1997, Vol. 25, No. 12, p2516-2521
	EI	Chan et al., "Intra-tRNA distance measurements for nucleocapsid protein-dependent tRNA unwinding during priming of HIV reverse transcription", PNAS Vol. 96, p459-464, January 1999.
	EJ	DNA-templated synthesis as a basis for the evolution of synthetic molecules. Liu DR, Gartner ZJ, Kanan MW, Calderone CT ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY 225: 612-ORGN , Part 2, MAR 2003
	EK	Rodriguez et al., "Template-directed extension of a guanosine 5'-phosphate covalently attached to an oligodeoxycytidylate template", J Mol Evol (1991) 33:477-482
	EL	Inoue et al, "Oligomerization of (Guanosine 5'-phosphor)-2-methylimidazolide on Poly(C), J. Mol. Biol. (1982), 162, 201-217
	EM	C. B. Chen et al., "Template-directed synthesis on Oligodeoxycytidylate and Polydeoxycytidylate templates" J. Mol. Biol. 1985, 181, 271
	EN	H. Rembold et al., "Single-strand regions of Poly(G) act as templates for oligo(C) synthesis" J. Mol. Evol. 1994, 38, 205.
	EO	T. Inoue et al., "A nonenzymatic RNA polymerase model", Science 1983, 219, p859-862
	EP	O. L. Acevedo et al., "Non-enzymatic transcription of an oligonucleotide 14 residues long", J. Mol. Biol. 1987, 197, p187-193
↓	EQ	C. Böhler et al.,"Template switching between PNA and RNA oligonucleotides", Nature 1995, 376, 578-581

EXAMINER /Ethan Whisenant/	DATE CONSIDERED 01/31/2007

EXAMINER: Initial if reference considered. Draw line through citation if not in conformance and not considered. Include copy of this form With next communication to applicant.

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT LIST OF DOCUMENTS CITED BY APPLICANT (Use several sheets if necessary)	ATTY DOCKET NO: PEDERSEN=9	SERIAL NO: 10/507,121
	APPLICANT: PEDERSEN, et al.	
	FILING DATE: march 17, 2005	CONFIRMATION NO.: 8893

OTHER DOCUMENTS (include author, title, name of publication, volume, pages and date of publication)

EW	ER	Acevedo et al., "Template-directed oligonucleotide ligation on hydroxylapatite", Nature vol. 321, 19 June 1986, p790-792
	ES	Piccirilli, "RNA seeks its maker", Nature vol. 376, 17 August 1995, p548-
	ET	A. W. Schwartz et al., "Template-directed synthesis of novel, nucleic acid-like structures", Science 1985, 228, 585-7
	EU	Halpin et al.: DNA display III. Solid-phase organic synthesis on unprotected DNA. PLoS Biol. 2004 Jul;2(7):E175. Epub 2004 Jun 22.
	EV	Halpin et al.: DNA display II. Genetic manipulation of combinatorial chemistry libraries for small-molecule evolution. PLoS Biol. 2004 Jul;2(7):E174. Epub 2004 Jun 22.
	EW	Halpin et al.: DNA display I. Sequence-encoded routing of DNA populations. PLoS Biol. 2004 Jul;2(7):E173. Epub 2004 Jun 22
	EX	"Highly Sensitive In Vitro Selections for DNA-Linked Synthetic Small Molecules with Protein Binding Affinity and Specificity" Doyon, J. B.; Snyder, T. M.; Liu, D. R. J. Am. Chem. Soc. 125, 12372-12373 (2003).
	EY	"Translation of DNA into Synthetic N-Acyloxazolidines" Li, X.; Gartner, Z. J.; Tse, B. N.; Liu, D. R. J. Am. Chem. Soc. 126, 5090-5092 (2004).
	EZ	"DNA-Templated Organic Synthesis: Nature's Strategy for Controlling Chemical Reactivity Applied to Synthetic Molecules" Li, X.; Liu, D. R. Angew. Chem. Int. Ed. 43, 4848-4870 (2004).
	FA	"DNA-Templated Organic Synthesis and Selection of a Library of Macrocycles" Gartner, Z. J.; Tse, B. N.; Grubina, R.; Doyon, J. B.; Snyder, T. M.; Liu, D. R. Science 305, 1601-1605 (2004).
	FB	"Nucleic Acid-Templated Synthesis as a Model System for Ancient Translation" Calderone, C. T. and Liu, D. R. Curr. Opin. Chem. Biol. 8, 645-653 (2004).
	FC	"DNA-Templated Functional Group Transformations Enable Sequence-Programmed Synthesis Using Small-Molecule Reagents" Sakurai, K.; Snyder, T. M.; Liu, D. R. J. Am. Chem. Soc. 127, 1660-1661 (2005).
	FD	"Translating DNA into synthetic Molecules", David R. Liu, PLoS Biology, July 2004, Vol 2, Iss. 7, p905-6.
	FE	"The Development of Amplifiable and Evolvable Unnatural Molecules", David R. Liu, Harvard Univ. Cambridge MA Dept of Chemistry and Chemical Biology, Report dated 4 Aug 2003 No. A104614, approved for public release.
	FF	Website of Prof. David R. Liu, publicly available 11 March 2000
	FG	Website of Prof. David R. Liu, publicly available 15 Oct 2000
	FH	Website of Prof. David R. Liu, publicly available 1 March 2001
	FI	Website of Prof. David R. Liu, publicly available 19 April 2001
	FJ	Website of Prof. David R. Liu, publicly available 23 Sept 2001
	FK	Website of Prof. David R. Liu, publicly available 24 Sept. 2002
	FL	Website of Prof. David R. Liu, publicly available 20 Nov 2002
	FM	Website of Prof. David R. Liu, publicly available 15 Oct 2003

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PTO/SB/08a (08-03)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 2

Complete if Known	
Application Number	10/507121
Filing Date	
First Named Inventor	H. Pedersen
Group Art Unit	
Examiner Name	
Attorney Docket Number	PEDERSEN9

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		US-			
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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Number Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
EW	AA	WO 02074929 A	09-26-2002	KANAN MATTEW W. et al.		
	AB	WO 0061775 A	10-19-2000	SERGEEV PAVEL		
↓	AC	WO9856904 A	12-17-1998	RIGEL PHARMACEUTICALS INC		

Examiner Signature	/Ethan Whisenant/	Date Considered	01/31/2007

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kind Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

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First Named Inventor	H. Pedersen
Group Art Unit	
Examiner Name	
Attorney Docket Number	PEDERSEN9

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T[2]
EW	AD	Summerer D. et al., "DNA-templated synthesis: more versatile than expected.", Angewandte Chemie, (Jan. 4, 2002), vol. 41, no. 1, pages 89-90.	
	AE	Gartner Z. J. et al., "The generality of DNA-templated synthesis as a basis for evolving non-natural small molecules.", Journal of the American Society, (July 18, 2001), vol. 123, no. 28, pages 6961-6963.	
	AF	Matsuura K. et al., "Construction of glyco-clusters by self-organization of site-specifically glycosylated oligonucleotides and their cooperative amplification of lectin-recognition.", Journal of the American Chemical Society, (Jan. 17, 2001), vol. 123, no.2, pages 357-358.	
	AG	Brenner S. et al., "Encoded combinatorial chemistry", Proceedings of the National Academy of Sciences of USA, National Academy of Science, (June 1, 1992), vol. 89, no. 12, pages 5381-5383.	
	AH	Visscher J. et al., "Template-directed synthesis of acyclic oligonucleotide analogues", Journal of Molecular Evolution. (1998), vol. 28, no. ½. Pages 3-6.	

Examiner Signature	/Ethan Whisenant/	Date Considered	01/31/2007

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	APPLICANT: PEDERSEN, et al.	
	FILING DATE: March 17, 2005	CONFIRMATION NO.: 8893

U.S. PATENT DOCUMENTS (include at least patentee, patent number and issue date)

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	PATENTEE	CLASS	SUB-CLASS	FILING DATE IF APPROP.
EW	BA	6 4 2 9 3 0 0	Aug 6, 2002	Kurz, M et al.			
	BB	6 2 0 7 4 4 6	Mar 27, 2001	Szostak, J et al.			
	BC	6 1 4 3 5 0 3	Nov 7, 2000	Baskerville, DS et al.			
	BD	6 6 2 0 5 8 7	Sept 16, 2002	Taussig, MJ et al.			May 28, 1998
	BE	20 03 00 04 1 2 2	Jan 2, 2003	Beigelman et al.			April 4, 2001
	BF	5 5 0 3 8 0 5	Apr 2, 1993	Sugarman et al.			
	BG	5 6 3 9 6 0 3	Jun 17, 1997	Dower et al.			
	BH	5 6 6 5 9 7 5	Sep 9, 1997	Kedar et al.			
	BI	5 7 0 8 1 5 3	Jan 13, 1998	Dower et al.			
	BJ	5 7 7 0 3 5 8	Jun 23, 1998	Dower et al.			
	BK	5 7 8 9 1 6 2	Aug 4, 1998	Dower et al.			
	BL	6 0 5 6 9 2 6	May 2, 2000	Sugarman et al.			July 23, 1996
	BM	6 1 4 0 4 9 3	Oct 31, 2000	Dower et al.			Sept 11, 1998
	BN	6 1 4 3 4 9 7	Nov 2, 2000	Dower et al.			Mar 6, 1998
	BO	6 1 6 5 7 1 7	Dec 26, 2000	Dower et al.			May 13, 1998
	BP	6 1 6 5 7 7 8	Dec 26, 2000	Kedar et al.			Jul 2, 1998
	BQ	6 4 1 6 9 4 9	July 9, 2002	Dower et al.			Feb 24, 1999
	BR	4 8 2 2 7 3 1	April 18, 1989	Watson et al.			

FOREIGN PATENT DOCUMENTS (include at least document number, publication date and country)

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION YES/NO
BS	9 8 3 1 7 0 0	23 July 1998	PCT			
BT	0 0 3 2 8 2 3	8 June 2000	PCT			
BU	0 0 4 7 7 7 5	17 Aug 2000	PCT			
BV	9 0 0 5 7 8 5	31 May 1990	PCT			
BW	0 6 0 4 5 5 2	6 July 1994	EP			
BX	9 5 1 2 6 0 8	11 May 1995	PCT			
BY	0 7 7 3 2 2 7	14 May 1997	EP			
BZ	0 7 7 6 3 3 0	4 June 1997	EP			
CA	0 0 2 3 4 5 8	27 April 2000	PCT			
CB	20 04 01 6 7 6 7	26 Feb 2004	PCT			
CC	9 6 1 2 0 1 4	25 April 1996	PCT			
CD	20 05 00 3 7 7 8	13 Jan 2005	PCT			

EXAMINER /Ethan Whisenant/ DATE CONSIDERED 01/31/2007

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	FILING DATE: March 17, 2005	CONFIRMATION NO.: 8893

OTHER DOCUMENTS (include author, title, name of publication, volume, pages & date of publication)

EW	CE	Nemoto, N et al. "In vitro virus: bonding of mRNA bearing puromycin at the 3'-terminal end to the C-terminal end of its encoded protein on the ribosome in vitro". FEBS Lett. 1997 Sep 8;414(2):405-8.
	CF	Roberts, RW et al. "RNA-peptide fusions for the in vitro selection of peptides and proteins". Proc Natl Acad Sci U S A. 1997 Nov 11;94(23):12297-302.
	CG	Kurz, M et al. "**An efficient synthetic strategy for the preparation of nucleic acid-encoded peptide and protein libraries for in vitro evolution protocols**" Fourth International Electronic Conference on Synthetic Organic Chemistry (ECSOC-4), www.mdpi.org/ecsoc-4.htm, September 1-30, 2000
	CH	Kurz, M et al. "Psoralen photo-crosslinked mRNA-puromycin conjugates: a novel template for the rapid and facile preparation of mRNA-protein fusions. Nucleic Acids Res. 2000 Sep 15;28(18):E83.
	CI	Benner, SA. "Expanding the genetic lexicon: incorporating non-standard amino acids into proteins by ribosome-based synthesis". Trends Biotechnol. 1994 May;12(5):158-63
	CJ	Mendel, D." Site-directed mutagenesis with an expanded genetic code". Annu. Rev. Biophys. Biomol. Struc. 1995. 24:435-62
	CK	Liu DR et al. "Engineering a tRNA and aminoacyl-tRNA synthetase for the site-specific incorporation of unnatural amino acids into proteins in vivo". Proc Natl Acad Sci U S A. 1997 Sep 16;94(19):10092-7.
	CL	Liu DR et al. "Progress toward the evolution of an organism with an expanded genetic code". Proc Natl Acad Sci USA. 1999 Apr 27;96(9):4780-5
	CM	Liu, R et al. "Optimized synthesis of RNA-protein fusions for in vitro protein selection". Methods Enzymol. 2000;318:268-93.
	CN	Wang, L et al. "A new functional suppressor tRNA/aminoacyl-tRNA synthetase pair for the in vivo incorporation of unnatural amino acids into proteins" J. Am. Chem. Soc 2000, 122, 5010-5011 Pub 5 April 2000
	CO	Ellman J.A., et al. " Biosynthetic method for introducing Unnatural Amino acids site specifically into proteins". Methods Enzymol. 202, 301-336 (1992)
	CP	**DOWER, WJ et al. "In vitro selection as a powerful tool for the applied evolution of proteins and peptides".Current Opinion in Chemical Biology, 2002, 6:390-398.**
	CQ	Gartner, ZJ et al. "Multistep small-molecule synthesis programmed by DNA templates". J. AM. CHEM. SOC. Vol. 124, No. 35, 2002, 10304-10306.
	CR	Calderone, CT et al. "Directing otherwise incompatible reactions in a single solution by using DNA-templated organic synthesis". Angew Chem Int Ed, 2002, 41, No. 21. 4104-4108.
	CS	Gartner, ZJ et al. "Two enabling architectures for DNA-templated organic synthesis ". Angew. Chem Int. Ed. 2003, 42, No. 12, 1370-1375.
	CT	Rosenbaum, DM et al. "Efficient and sequence-specific DNA-templated polymerization of peptide nucleic acid aldehydes". J. AM. CHEM. SOC. Vol. 125, No. 46, 2003, 13924-13925.
	CU	Li, X et al. "Stereoselectivity in DNA-templated organic synthesis and its origins". J. AM. CHEM. SOC. Vol. 125, No. 34, 2003, 10188-10189.
	CV	Gordon, EM et al. "Applications of combinatorial technologies to drug discovery. 2. Combinatorial organic synthesis, library screening strategies, and future directions". Journal of Medicinal Chemistry, Vol. 37, No. 10, May 13, 1994.
	CW	Otto, S et al. S"Recent developments in dynamic combinatorial chemistry". Current opinion in Chemical Biology 2002, 6: 321-327.
	CX	Pavia, MR. "The Chemical generation of molecular diversity". http://www.netsci.org/Science/Combichem/feature01.html

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EW	CY	Braun, E, et al. "DNA-templated assembly and electrode attachment of a conducting silver wire". Nature, Vol. 391, 19 February 1998, 775-778.
	CZ	**Tanaka, K et al. "Synthesis of a novel nucleoside for alternative DNA base pairing through metal complexation" J. Org. Chem. 1999, 64, 5002-5003.**
	DA	**Weizman, H et al. "2,2'-Bipyridine ligandoside: a novel building block for modifying DNA with intra-duplex metal complexes". J. Am. Chem. Soc. 2001, 123, 3375-3376.**
	DB	Frutos, AG et al. **"Demonstration of a word design strategy for DNA computing on surfaces". Nucleic Acids Research, 1997, Vol. 25, No. 23, 4748-4757.**
	DC	Loweth, CJ et al. "DNA-based assembly of gold nanocrystals". Angew. Chem. Int. Ed. 1999, 38, No. 12. 1808-1812.
	DD	DeWitt, SH et al. "Diversomers": an approach to nonpeptide, nonoligomeric chemical diversity". Proc. Natl. Acad. Sci, USA, Vol. 90, pp. 6909-6913, August 1993.
	DE	Nielsen, J et al. "Synthetic methods for the implementation of encoded combinatorial chemistry". J. Am. Chem. Soc. 1993, 115, 9812-9813.
	DF	Ohlmeyer, MHJ et al. "Complex synthetic chemical libraries indexed with molecular tags". Proc. Natl. Acad. Sci, USA, Vol. 90, pp. 10922-10926, Dec. 1993, Chemistry.
	DG	Zuckermann, RN et al. "Discovery of nanomolar ligands for 7-transmembrane G-protein-coupled receptors from a diverse N-(substituted) glycine peptoid library". J. Med. Chem. 1994, 37, 2678-2685.
	DH	Luo, P et al. "Analysis of the structure and stability of a backbone-modified oligonucleotide: implications for avoiding product inhibition in catalytic template-directed synthesis". J. Am. Chem. Soc. 1998, 120, 3019-3031
	DI	Luther, A et al. "Surface-promoted replication and exponential amplification of DNA analogues". Nature, Vol. 396, 19 November 1998, 245-248.
	DJ	Klekota, B et al. "Selection of DNA-Binding Compounds via Multistage Molecular Evolution". Tetrahedron 55 (1999) 11687-11697.
	DK	Furlan, RLE et al. "Molecular amplification in a dynamic combinatorial library using non-covalent interactions". Chem. Commun., 2000, 1761-1762.
	DL	Ramström, O et al. "In situ generation and screening of a dynamic combinatorial carbohydrate library against concanavalin A". ChemBioChem, 2000, 1, 41-48.
	DM	Cousins, GRL et al. "Identification and Isolation of a Receptor for N-Methyl Alkylammonium Salts: Molecular Amplification in a Pseudo-peptide Dynamic Combinatorial Library". Angew. Chem. Int. Ed., 2001, 40, No. 2, 423-427.
	DN	Roberts, SI et al. "Simultaneous selection, amplification and isolation of a pseudo-peptide receptor by an immobilised N-methyl ammonium ion template". Chem. Commun., 2002, 938-939.
	DO	Elghanian, R et al. "Selective colorimetric detection of polynucleotides based on the distance-dependent optical properties of gold nanoparticles". Science, Vol. 277, 22 August 1997,.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 2

Complete if Known	
Application Number	10/507,121
Filing Date	March 17, 2005
First Named Inventor	Henrik PEDERSEN
Group Art Unit	
Examiner Name	
Attorney Docket Number	PEDERSEN=9

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
EW	AA	5,047,519		HOBBS, Jr. et al	09-10-1991	
	AB	5,948,648		KHAN et al	09-07-1999	
	AC	6,098,875		KHAN et al	08-01-2000	
	AD	6,197,555	B1	KHAN et al	03-06-2001	
	AE	6,248,568		KHAN et al	06-19-2001	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Number Office[3]	Number	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
	AF	WO	93/06121	A1	DOWER et al	04-01-1993		
	AG	WO	00/23458	A1	HARBURY et al	04-27-2000		
	AH	WO	00/61775	A1	SERGEEV	10-19-2000		
	AI	WO	02/074929	A2	LIU et al	09-26-2002		

Examiner Signature	/Ethan Whisenant/	Date Considered	01/31/2007

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[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

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Sheet 2 of 2

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Application Number	10/507,121
Filing Date	March 17, 2005
First Named Inventor	Henrik PEDERSEN
Group Art Unit	
Examiner Name	
Attorney Docket Number	PEDERSEN=9

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T[2]
EW	AJ	BRENNER, Sydney and Richard A. LERNER. "Encoded Combinatorial Chemistry," *Proc. Natl. Acad. Sci. USA*, Vol. 89, pp. 5381-5383, June 1992.	
	AK	BRUICK, Richard K. et al. "Template-Directed Ligation of Peptides to Oligonucleotides," *Chemistry and Biology* 1996, Vol 3 No 1.	
	AL	VISSCHER, J. and Alan W. SCWARTZ. "Template-Directed Synthesis of Acyclic Oligonucleotide Analogues," *J Mol Evol* (1988) 28:3-6.	
	AM	WALDER, Joseph A. et al. "Complementary carrier Peptide Synthesis: General Strategy and Implications for Prebiotic Origin of Peptide Synthesis," Department of Chemistry, and Department of Biochemistry and Molecular Biology, Northwestern University, Evanston, Illinois 60201:	

Examiner Signature	/Ethan Whisenant/	Date Considered	01/31/2007

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Attorney Docket: PEDERSEN=9
Confirmation No.: 8893

Examiner's Initials	NO.	AUTHOR	TITLE	JOURNAL NAME, VOLUME NUMBER, PAGE NUMBER PUBLICATION DATE
EWS	1	Walder JA, Walder RY, Heller MJ, Freier SM, Letsinger RL, Klotz IM.	Complementary carrier peptide synthesis: general strategy and implications for prebiotic origin of peptide synthesis.	Proc Natl Acad Sci U S A. Jan., 1979; 76(1):51-5.
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